

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/008412

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H05K5/00 B60Q3/00 B60Q1/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B60Q H05K F21V F21K F21S H01R H01L H05B H02G B60R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 672 000 A (LIN TAYEH) 30 September 1997 (1997-09-30)	1,2,5-9
Y	column 1, line 24 - column 4, line 14 figures 1,3-5,7,8	10,11
Y	US 4 087 696 A (BULL DALE L) 2 May 1978 (1978-05-02) abstract; figures 1-6 column 1, lines 1-14 column 2, line 65 - column 5, line 24	10,11
X	DE 101 33 255 A (OSRAM OPTO SEMICONDUCTORS GMBH) 30 January 2003 (2003-01-30) abstract; figures 1-4 paragraphs '0001!', '0006!', '0016!' - '0025! claims 12,13	1,6,7

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

13 January 2005

Date of mailing of the international search report

02.02.2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 422 716 B2 (HENRICI DIETER ET AL) 23 July 2002 (2002-07-23) column 1, line 5 - column 2, line 50 column 3, line 6 - column 4, line 6 figures 1-7	1,2
X	US 6 017 241 A (KOMAI NEIL M) 25 January 2000 (2000-01-25) abstract; figures 1-10 column 1, lines 5,6,58-67 column 2 column 2, line 1 - line 10 column 3, line 1 - column 4, line 39	6-8
X	EP 1 039 214 A (AUTOPAL SRO) 27 September 2000 (2000-09-27)	12-14
Y	paragraphs '0001!', '0008!', '0009!', '0016!; figure 2 claim 5	15
Y	EP 1 289 341 A (HELLA KG HUECK & CO) 5 March 2003 (2003-03-05) abstract; figures 1,2 paragraphs '0001!', '0016!', '0021!', '0022!	15
X	WO 98/38613 A (STAR HEADLIGHT & LANTERN CO IN) 3 September 1998 (1998-09-03) abstract; claims 1,2,4; figure 1 page 1 - page 4	1
X	US 5 660 461 A (IGNATIUS RONALD W ET AL) 26 August 1997 (1997-08-26) abstract; figures 2-8 column 1, line 51 - column 2, line 3 column 2, line 66 - column 6, line 39	1
X	EP 1 178 706 A (FER FAHRZEUGELEK K GMBH) 6 February 2002 (2002-02-06) abstract; figure 4 paragraphs '0001!' - '0003!', '0011!', '0013!', '0018!', '0019!	12
A	US 2001/007526 A1 (OHKOHDO MASAYA ET AL) 12 July 2001 (2001-07-12) paragraphs '0002!', '0014!', '0036!' - '0044! figures 1-5	6

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/008412

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5672000	A	30-09-1997	NONE	
US 4087696	A	02-05-1978	NONE	
DE 10133255	A	30-01-2003	DE 10133255 A1 WO 03007389 A2 EP 1405377 A2 JP 2004535080 T US 2004240229 A1	30-01-2003 23-01-2003 07-04-2004 18-11-2004 02-12-2004
US 6422716	B2	27-09-2001	DE 10012734 C1 AT 239304 T DE 50100200 D1 EP 1134849 A1 ES 2197895 T3 JP 2002008752 A US 2001024368 A1	27-09-2001 15-05-2003 05-06-2003 19-09-2001 16-01-2004 11-01-2002 27-09-2001
US 6017241	A	25-01-2000	NONE	
EP 1039214	A	27-09-2000	CZ 9901041 A3 EP 1039214 A2	15-11-2000 27-09-2000
EP 1289341	A	05-03-2003	DE 10140275 A1 EP 1289341 A2	06-03-2003 05-03-2003
WO 9838613	A	03-09-1998	US 5963126 A AU 6442598 A WO 9838613 A1	05-10-1999 18-09-1998 03-09-1998
US 5660461	A	26-08-1997	CA 2204432 A1 DE 69530221 D1 DE 69530221 T2 EP 0796506 A1 JP 10502772 T WO 9618210 A1	13-06-1996 08-05-2003 19-02-2004 24-09-1997 10-03-1998 13-06-1996
EP 1178706	A	06-02-2002	DE 10037694 A1 EP 1178706 A2	14-02-2002 06-02-2002
US 2001007526	A1	12-07-2001	JP 2000151150 A JP 2000207922 A EP 1002696 A2 KR 2000034942 A US 6386733 B1 KR 2000052318 A	30-05-2000 28-07-2000 24-05-2000 26-06-2000 14-05-2002 16-08-2000